

OFFSHORE

Work Order ID 137573

137573

Item ID: D205-634-041 Accept *N9000040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH
Start Date: 10/6/2015 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 10/20/2015 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: SH Date: 20151006 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2580-041	G		DAS						
100	Document Control	0.00	6						
100	DOCUMENT CONTROL		9-89						
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy D205-634 bluefile & type labels per PPP D205-634-041		CHG005						
									NOV 12 2015
110		0.00							
110	BENDING MACHINE - SKIDTUBES								
CNC Bend 1	Memo	0.01							
CNC Delta 100 Bender	1-Bend as per program D2580.C on CNC Bender and Folio 16								
	2-Cut tubes as per Dwg. D2580								
	3- scribe batch# in aft end of tube								

B137573

DGL
15-10-21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

Work Order ID 137573

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Item ID: D205-634-041 Accept ***N900040100*** Setup Start ***NS1***
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Start Date: 10/6/2015 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 10/20/2015 Req'd Qty: 1.00 ***1*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120									
Skidtubes	Memo	0.02							
Skidtubes	1- Deburr ends and remove bending marks								
	2- Prepare tube for welding as per QSI 004								
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

DAS
18
9-89

1 0 15-10-21

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
									QC / QA Coordinator Approval																
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER :																									

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Page 3

Item ID: D205-634-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH
Start Date: 10/6/2015 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 10/20/2015 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

0.00

140

Skidtubes

0.03

Skidtubes

Memo

1-Weld step D2576 as per Dwg. D2580 and QSI004
A/R Aluminum Rod *M132917*

2-Grind welds on step as per Dwg D2580

3- Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002
and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start
expantion and finish with 1/2 x 18G to achieve dwg dimation.

4-Drill holes for wearplates using DT 8217 & DT8937, 7.40" from most fwd
saddle holes (ref only) Open holes to 19/64", adjust stopper not to hit
web.Deburr

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr

150

QC10- Inspect visual per QSI004- ground welds 0.00

150

QC

Memo

0.00

Quality Control

DAS

38

9-89

OCT 27 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

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Page 4

Item ID: D205-634-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 10/20/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							
160									DAS 38 9-89
QC	Memo	0.00				1			OCT 27 2015
Quality Control									
170	Pressure Wash per QSI005 4.3	0.00							
170									
HandFinish	Memo	0.01				1	0	15-10-28	JL
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.								
180	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
180									
Powdercoat	Memo	0.01				1	0	15-10-28	DAS 34 9-89
Powder Coating	START TIME: 2:30 OVEN TEMPERATURE: 225 FINISH TIME: 3:00								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
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Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 137573***137573***

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Item ID: D205-634-041

Accept

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Start Date: 10/6/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 10/20/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190

QC3- Inspect Part Finish

0.00

190

QC

Memo

0.00

Quality Control

1x d Hl 12/10/29

**DAS
15
9-89**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 137573***137573***

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Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 10/20/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
200									
HandFinish		0.03							
Hand Finishing	Memo 1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates A/R Sikaflex-291 <u>M133427</u> Sikaflex expire date: <u>16102</u> 2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580 3-Inspect for foreign object per QSI 024 <u>RTU 598 M133436 16105</u> 4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive A/R Sikaflex-291 <u>M133427</u> Sikaflex expire date: <u>16102</u> 5-Wing Walk as per Dwg D2580 and QSI 005 4.4 Batch: <u>M133029</u>								

DQA: _____ Date: _____



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210	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
210									NOV 10 2015
QC	Memo	0.00							
Quality Control	Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024								
220		0.00							
220	Packaging								DAS 8 9-89
Packaging	Memo	0.00			DAS 28 9-89				NOV 12 2015
Packaging	Identify and pack for shipping as per PPPD205-634-041								
	Location: _____								
	PPP Rev: <u>084</u>								
230	QC21- Final Inspection - Work Order Release	0.00							
230									NOV 12 2015
QC	Memo	0.00							
Quality Control									

SA 20151112

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY																																																												
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER : _____																																																															

Picklist Print

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Page 1

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC IPP REV:R 12.01.23 AS
PER ECN11-684 VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1 *D4202-1* Spacer		Manufactured	No			140	Each	126.0000	20	20			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG001		126			20				
				134465		1							
				135848		1							
				135923		124							
D2580-1 *D2580-1* 205 Bent Tube		Manufactured	No			110	Each	2.0000	1	1			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG002		2							
				135762		2							
D2576-3 *D2576-3* Step (Machining Detail)		Manufactured	No			140	Each	32.0000	1	1			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG001		32							
				136277		7							
				136730		25							

Picklist Print

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Page 2

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

D2855

Manufactured No

200

Each

79.0000

1

1

D2855

Cap

all 10/10/29

Location

Loc Qty

Loc Code

FP001

79

10360

2

117281

2

127359

10

134027

40

134673

25

x1

AN3-5A

Purchased No

200

Each

170.0000

2

2

AN3-5A

Bolt

all 10/10/29

Location

Loc Qty

Loc Code

CA

130

m129682

130

FP001

40

m133234

40

x2

NAS1149D0332J

Purchased No

200

Each

1,746.000

2

2

NAS1149D0332.J

Washer

all 10/10/29

Location

Loc Qty

Loc Code

CA

14

m129682

14

GA

415

m132677

415

ST269

1317

m130325

900

m132677

417

x2

Picklist Print

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Page 3

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

AELS8-1032-130 Purchased

No

200

Each

2,981.000

50

50

AI S7-1032-130 y

**

Rivnut

ALS4-1032-130

Location

Loc Qty

Loc Code

CCK004

1452

M133077

x50

M128649

1452

FG

100

M128649

100

st549

1429

M128649

1429

AN3C4A

Purchased

No

200

Each

476.0000

50

50

AN3C4A

**

Bolt

Location

Loc Qty

Loc Code

FG

20

M133440

x50

122814

20

FP001

111

M132551

61

M132803

50

ST349

152

M133234

152

ST350

193

M132317

193

Picklist Print

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Page 4

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

200

Each

5,758.000

50

50

NAS1149C0332R

WASHER

******all 10/10/29LocationLoc QtyLoc Code

FP001

1004

m132930

1004

FP01

1871

m133284

1871

GA

441

m133284

441

ST271

2442

m133284

2442

X50

D3566-13

Manufactured

No

200

Each

11.0000

1

1

D3566-13

Gasket Fwd

******all 10/10/29LocationLoc QtyLoc Code

FG

4

92482

2

98908

2

FP001

7

136370

7

B 137076X1

D3566-5

Manufactured

No

200

Each

11.0000

1

1

D3566-5

Gasket Center Aft

******all 10/10/29LocationLoc QtyLoc Code

FG

3

89219

1

94119

2

FP001

8

130333

5

136521

3

B 137674X1

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Shop Packet Print

Page 4

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Page 5

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

D3566-1

Manufactured No

200

Each

14.0000

2

2

D3566-1

Gasket Aft / Fwd

del 10/16/10

Location

Loc Qty

Loc Code

FG

10

B138321

x2

117012

4

89051

2

96430

2

98981

2

FP001

4

136553

4

D3564-11

Manufactured No

200

Each

14.0000

1

1

D3564-11

Wearplate Aft

del 10/16/09

Location

Loc Qty

Loc Code

FG

6

B136463

x1

77056

4

85473

2

FP002

8

135431

8

D3564-13

Manufactured No

200

Each

2.0000

1

1

D3564-13

Wearpad Fwd

del 10/10/29

Location

Loc Qty

Loc Code

FG

2

B137628

x1

89044

2

Picklist Print

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Page 6

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

D3564-9

Manufactured No

200

Each

6.0000

1

1

D3564-9

Wearplate Fwd

**

10/10/09

Location

Loc Qty

Loc Code

FG

6

76950

4

88407

2

B136563

X1

D3564-5

Manufactured No

200

Each

18.0000

1

1

D3564-5

Wearplate Center

**

10/10/29

Location

Loc Qty

Loc Code

FG

4

34806

2

89048

2

FP002

14

126310

1

129544

1

135404

1

136428

5

136429

6

X1

D2594-3

Manufactured No

200

Each

236.0000

16

16

D2594-3

O-Ring

**

10/10/29

Location

Loc Qty

Loc Code

FP001

236

134838

116

135859

120

M137829

X16

Picklist Print

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Page 7

Work Order ID: 137573

137573

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube with Standard Wearplates Fits LH or RH

Start Date: 10/6/2015

Required Date: 10/20/2015

Start Qty: 1.00

Required Qty: 1.00

D2594-1

Manufactured No

200

Each

475.0000

16

16

D2594-1

all skidz

Plug

Location

Loc Qty

Loc Code

FP001

475

119830

68

134804

16

135914

139

135938

117

136657

100

42807

27

88922

8

116

LIST OF MATERIALS						
ITEM	QTY -041	QTY -045	QTY -047	QTY -049	PART NUMBER	DESCRIPTION
1	X				D2580-041	SKIDTUBE ASSEMBLY
2		X			D2580-045	SKIDTUBE ASSEMBLY
3			X		D2580-047	SKIDTUBE ASSEMBLY
4				X	D2580-049	SKIDTUBE ASSEMBLY
20	1	1	1	1	D2500-1-190	EXTRUSION
21			16	16	D2570	BUSHING
22	1	1	1	1	D2576-3	STEP
23		4			D2579	SPACER
24	16	16	8	8	D2594-1	PLUG
25	16	16	8	8	D2594-3	O-RING
26	1	1	1	1	D2596	205 WEB
27	1	1	1	1	D2855	AFT CAP
28	1	1			D3564-5	WEARSHOE
29	1	1			D3564-9	WEARSHOE
30	1	1			D3564-11	WEARSHOE
31	1	1			D3564-13	WEARSHOE
32	2	2			D3566-1	GASKET
33	1	1			D3566-5	GASKET
34	1	1			D3566-13	GASKET
35	20	20	24	24	D4202-1	SPACER
36			1		D4406-041	WEARPLATE ASSEMBLY
37			1		D4406-043	WEARPLATE ASSEMBLY
37				1	D5061-1	FWD WEARPLATE
37				1	D5061-3	AFT WEARPLATE
50	50	50			ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
51	50	50			AN3C4A	BOLT
52	2	2	2	2	AN3-5A	BOLT
53			8	8	AN4-45A	BOLT
54	50	50			NAS1149C0332R	WASHER (AN960C10L)
55	2	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
56			8	8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

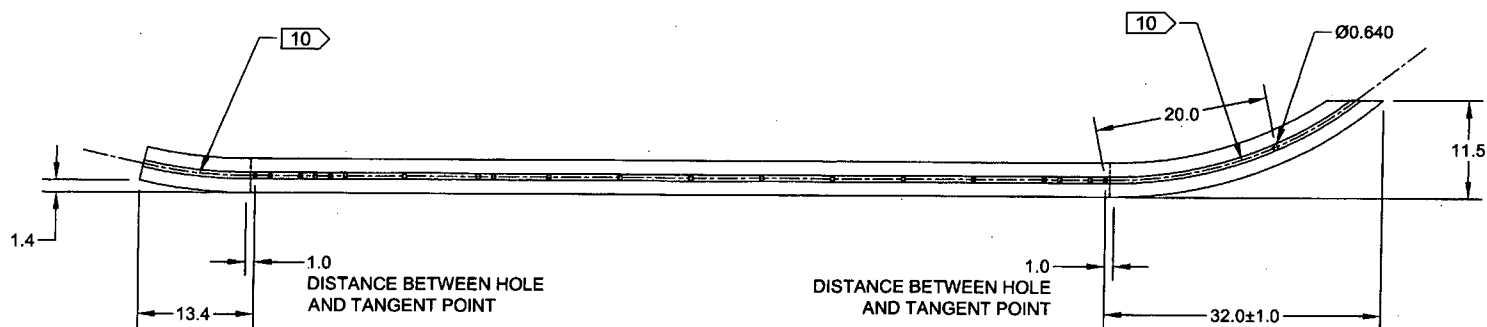
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY (-041/-047/-049) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3 POWDER COAT ASSEMBLY (-045) GREEN SANDTEX (REF 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 45.1 lbs
D2580-049 = 32.0 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 80 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047/-049)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

RELEASED
2014-04-29

20151006

SH 137573

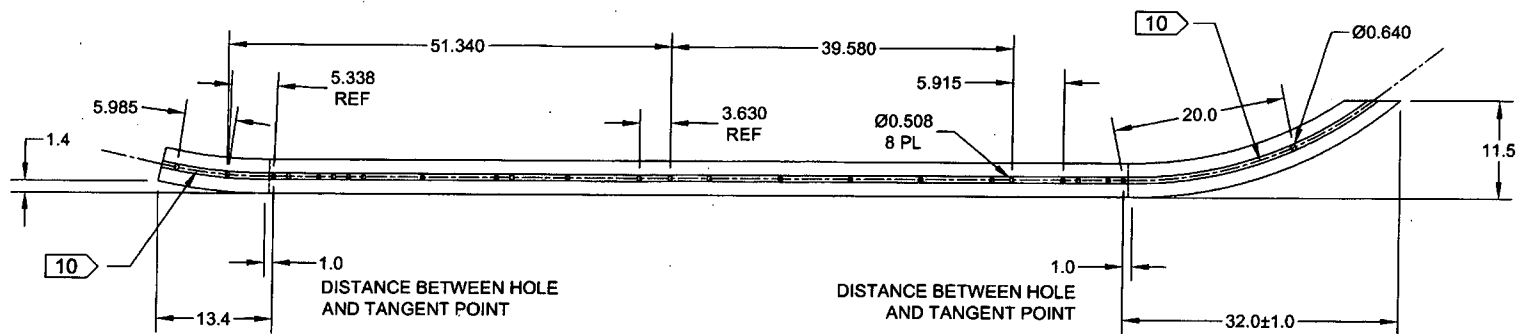
G	ADDED -049, -047 WEIGHT UPDATED PER DSI 9598	AJS	14.04.09
F	INCORPORATE DEO D2580-E-1 PER PAR12-218	DC	13.06.20
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	A.P.	DRAWING NO.	REV. G
MFG. APPR.	N	D2580	SHEET 1 OF 9
APPROVED	14	TITLE	SCALE
DE APPR.	14	205 SKIDTUBE ASSEMBLY	NTS
DATE	14.04.09	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

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2014-04-29

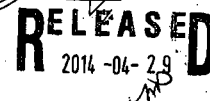
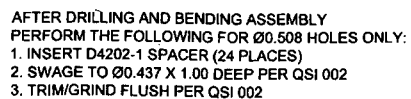
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	A.P.	DRAWING NO.	REV. G
MFG. APPR.	<i>[Signature]</i>	D2580	SHEET 3 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	205 SKIDTUBE ASSEMBLY	NTS
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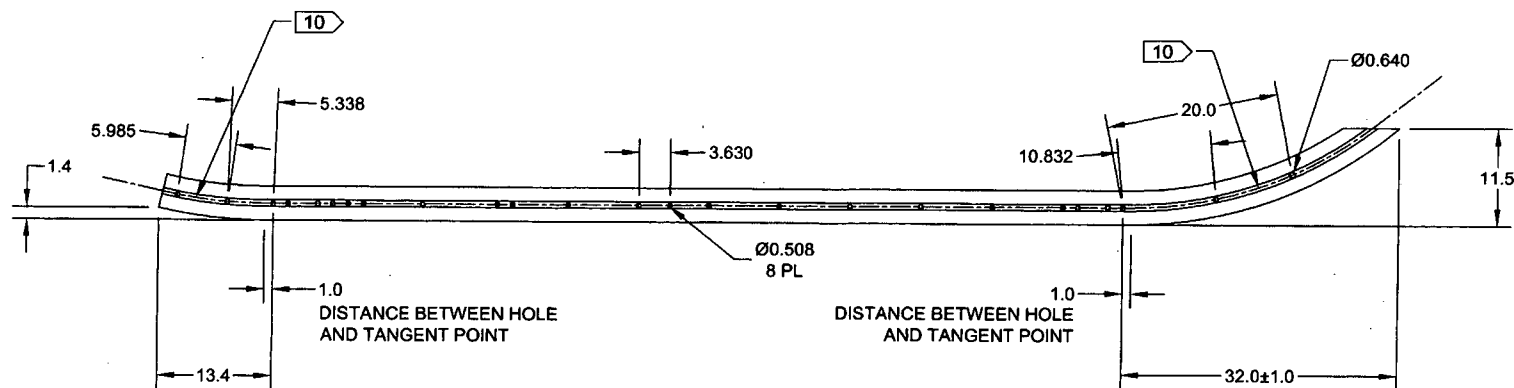
D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

RELEASED
2014-04-29

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	<i>A.L.</i>	DRAWING NO.	REV. G
MFG. APPR.	<i>[Signature]</i>	D2580	SHEET 5 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	205 SKIDTUBE ASSEMBLY	NTS
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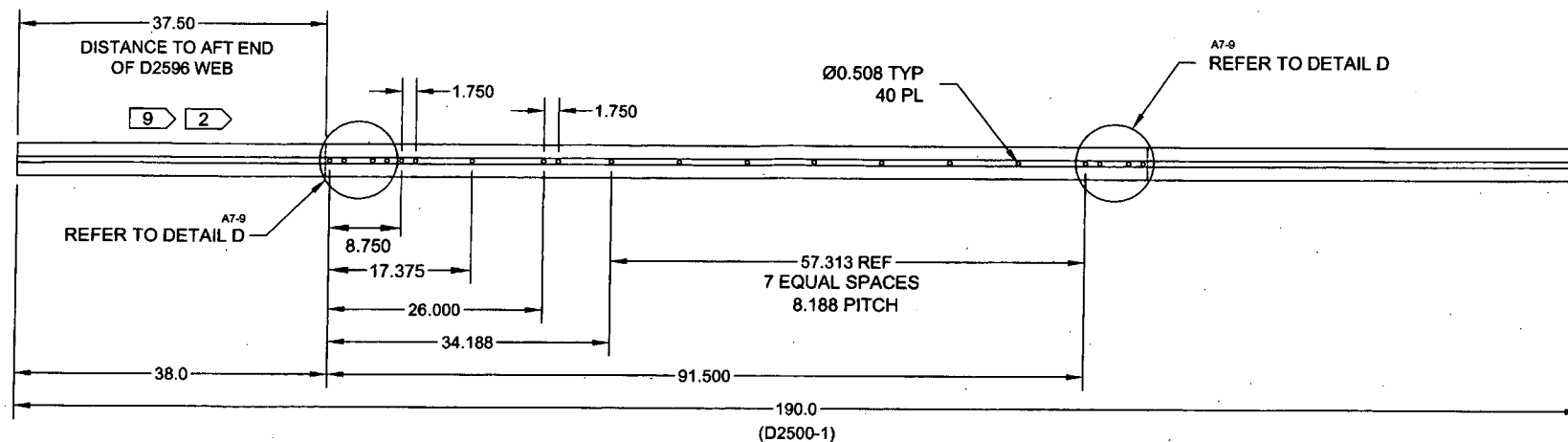
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DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>A.P.</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D2580	SHEET 7 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	205 SKIDTUBE ASSEMBLY	NT
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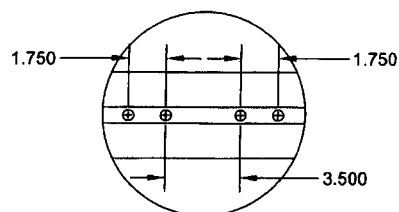
D2580-7 BENT TUBE
(MAKE FROM D2580-101 TUBE)

RELEASED
2014-04-29
WD

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	A.P.	DRAWING NO.	REV. G
MFG. APPR.		D2580	SHEET 8 OF 9
APPROVED		TITLE	SCALE
DE APPR.		205 SKIDTUBE ASSEMBLY	NTS
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D2580-101 TUBE



DETAIL D C3-9
SCALE 5X C7-9

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2014-04-29
WJD

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	A.P.	DRAWING NO.	REV. G
MFG. APPR.		D2580	SHEET 9 OF 9
APPROVED		TITLE	SCALE
DE APPR.		205 SKIDTUBE ASSEMBLY	NTS
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